Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (original): A method for compressing image data, comprising the steps of:

decomposing the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane; and

forming an encoded bit-stream by coding bit-planes of coefficient data in the code-blocks according to an arithmetic coding scheme in order to form an encoded bit-stream;

wherein coefficient data from at least one bit-plane is included in the encoded bit-stream without arithmetic coding.

Claim 2 (original): A method as claimed in claim 1, wherein the arithmetic coding scheme operates in a plurality of coding passes, and wherein at least one of the arithmetic coding passes for the coefficient data from said at least one bit-plane is not performed during the image data compression.

Claim 3 (original): A method as claimed in claim 2, wherein coefficient data from bit-planes $p<p_0-K$ are written directly into the encoded bit-stream without arithmetic coding, wherein p_0 denotes the most significant bit-plane of the code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 4 (original): A method as claimed in claim 3, wherein $K = 3$.

Claim 5 (original): A method as claimed in claim 1, wherein the method for compressing image data is based on embedded block coding with optimized truncation and employs a Wavelet transform.

Claim 6 (original): An image data compression system, comprising:

a decomposition processor which decomposes the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane; and

an arithmetic coder coupled to the decomposition processor which forms an encoded bit-stream by coding bit-planes of coefficient data in the code-blocks according to an arithmetic coding scheme;

wherein the arithmetic coder is constructed such that coefficient data from at least one bit-plane is not subjected to said arithmetic coding scheme so as to be included in the encoded bit-stream without arithmetic coding.

Claim 7 (original): An image data compression system as claimed in claim 6, wherein the arithmetic coding scheme operates in a plurality of coding passes, and wherein at least one of the arithmetic coding passes is bypassed for the coefficient data from said at least one bit-plane during the image data compression.

Claim 8 (original): An image data compression system as claimed in claim 7, wherein the arithmetic coder operates such that coefficient data from bit-planes $p<p_0-K$ are written directly into the encoded bit-stream without arithmetic coding, wherein p_0 denotes the most significant bit-plane of the code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 9 (original): An image data compression system as claimed in claim 8, wherein $K = 3$.

Claim ~~5~~ 10 (currently amended): An image data compression system as claimed in claim 6, wherein the arithmetic coder is based on embedded block coding with optimized truncation and the decomposition processor employs a Wavelet transform.

Claim 11 (canceled)

Claim 12 (previously presented): The method of claim 1, wherein arithmetically coded bit-plane data is interleaved with the bit-plane coefficient data included in the bit-stream without arithmetic coding.

Claim 13 (previously presented): A method for compressing image data, comprising the steps of:

decomposing the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane;

processing bit-planes of coefficient data in the code blocks in multiple coding passes to generate raw bit-plane data;

arithmetically coding a portion of raw bit-plane data to generate arithmetically coded data; and

writing the arithmetically coded data and the raw bit-plane data not arithmetically coded directly into a bit-stream.

Claim 14 (previously presented): The method of claim 13, wherein raw bit-plane data generated during at least one coding pass for a prescribed class of bit-planes is written directly into the bit-stream.

Claim 15 (previously presented): The method of claim 14, wherein raw bit plane data generated during at least one coding pass for bit-planes $p<p_0-K$ is written directly into the bit-stream, wherein p_0 denotes the most significant bit-plane of a code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 16 (previously presented): The method of claim 15, wherein $K = 3$.

Claim 17 (previously presented): The method of claim 13, wherein the method for compressing image data is based on embedded block coding with optimized truncation and employs a wavelet transform.

Claim 18 (previously presented): The method of claim 13, wherein arithmetically coded data is interleaved with raw bit-plane data in the bit-stream.